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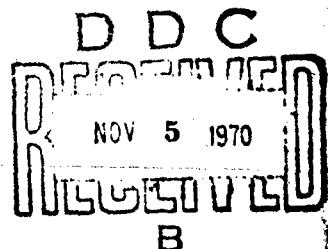
A Manpower Delivery System: Implications for Curriculum Development

by

Robert G. Smith, Jr.

Presentation to
Invitational Conference for
Curriculum Development and Vocational Education
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Prefatory Note

This paper was presented at the Invitational Conference on Curriculum Development and Vocational Education in Minneapolis, Minnesota in March 1970. The author participated in the Seminar of the Research Coordinating Unit in Occupational Education. Proceedings of the seminar will be published by the University of Minnesota.

Dr. Smith is Director for Program Development for the Human Resources Research Organization.

A MANPOWER DELIVERY SYSTEM: IMPLICATIONS FOR CURRICULUM DEVELOPMENT

Robert G. Smith, Jr.

Once one has become infected, as I have, with system thinking, one develops some special habits. You begin thinking about purposes, about functions to carry out those purposes, and about interrelationships among the functions. But especially you tend to be convinced that the overall context of a matter is important.

Following this belief, I plan to present a simplified and abstract model of a manpower delivery system. I hope that this model will enlighten later discussion by providing a suitable context for the translation from the military problem to the civilian problem.

The features of this model have been suggested by a study of the report of planning for the State of Pennsylvania.¹

OCCUPATIONAL DEMANDS

In Figure 1 is shown one of the major components of the manpower delivery system—a set of occupations. The reader should think of the block of occupations as representing a time line and changes in occupations in accordance with various trends. For instance, at the top of

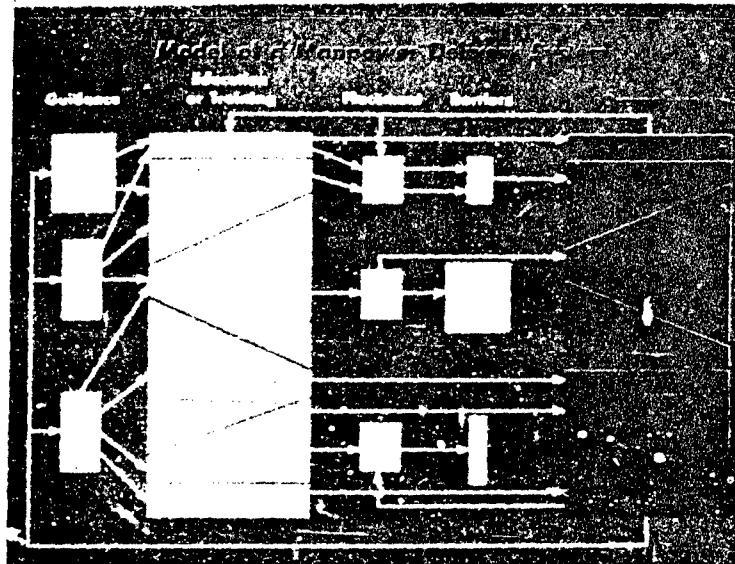


Figure 1

¹Walter M. Arnold. *Vocational and Continuing Education in Pennsylvania: A Systems Approach to State-Local Program Planning*, Pennsylvania Department of Public Instruction, 1969.

the figure we see represented an occupation that has a relatively small requirement, but one that is expected to be stable over the next several years. Moving down the block, we see an occupation that has a larger requirement right now, but one that is declining in demand. Next, we see an occupation that has a fairly small demand at the present time, but whose demand is expanding. At the bottom of the occupation block is a representation of an occupation with a large and stable demand.

From this figure it is clear that when we consider the implications of both stable and changing demands, we must develop information concerning the overall economic predictions for the industries in which these jobs occur, and we must also be very much concerned with changing demands for various kinds of occupations.

EDUCATIONAL AND/OR TRAINING INSTITUTIONS

Figure 2 adds the next major group of components to the system—a set of educational or training institutions whose purpose is to provide manpower to the various occupations. Again, it seems clear that the educational and training facilities should have a quantitative relationship with the demand for occupations. Thus, if the occupation is decreasing, the education or training institutions should decrease their output. If the occupational demand is increasing, then the education or training institutions should increase their flow. Of course, it is probably easier to start new courses than it is to stop or reduce existing ones.

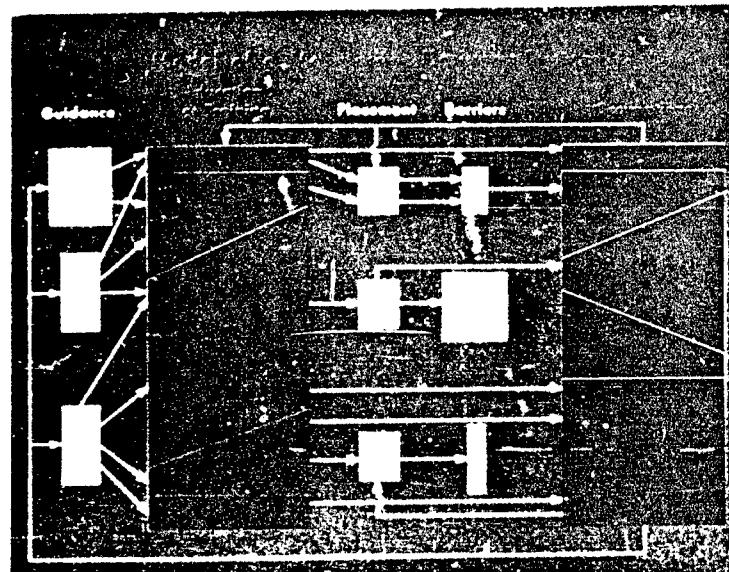


Figure 2

In addition to these quantitative considerations, analyses should be made of the occupational demands in a qualitative sense to determine what kinds of performances they will demand of the people who enter them. These factors will determine the objectives.

GUIDANCE

In Figure 3 we add some additional features to our model. The first of these is guidance. By guidance I refer to the activities of attempting to provide some reasonable match among the characteristics of the individual student, the demands of various occupations, and the educational barriers that must be crossed before the individual can enter his preferred occupation.

If the term "guidance" seems too directive for some readers, they might wish to substitute the term "counselling" for it.

The guidance activities represent a relatively long range method by which quantitative adjustments could be made to adjust the flow of personnel entering various occupations to the long-range trends for that occupation. At the same time, it would attempt to ensure a reasonable degree of success for the individual during the training or education for the occupation, as well as success and satisfaction in the occupation itself.

Among the activities that I would include under the function of guidance are the measurement of student aptitude and interest; both general introductions to the world of work, and specific introductions

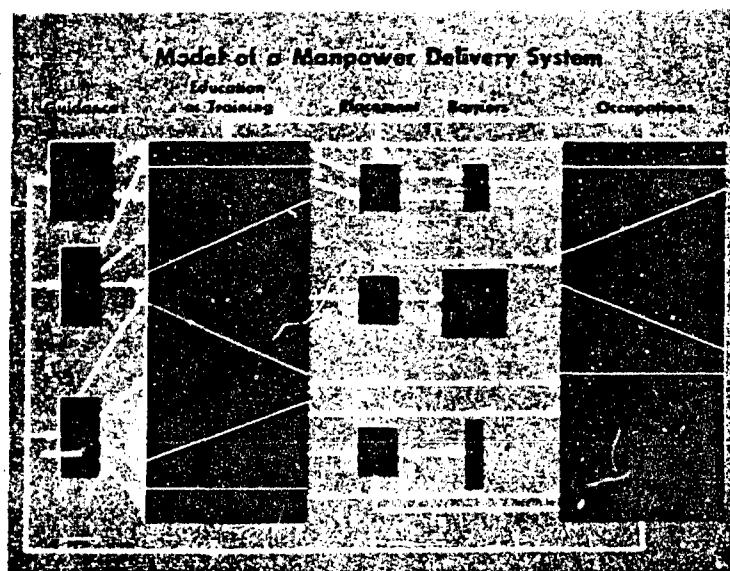


Figure 3

to the particular occupations the student is interested in, and the charting of an educational path that will help the student enter his preferred vocation or profession.

PLACEMENT

If guidance represents the long-term adjustment of the system to the changing demands of various occupations, placement represents a relatively short term adjustment. It refers to those methods of obtaining a match between the vocational or professional graduate and the occupation. Placement would include such activities as those of the state or federal employment services, the activities of educational institutions themselves, and the activities of the individual himself.

A number of studies have shown that most people find their own jobs, perhaps with help from friends or family, rather than using governmental or educational placement activities. This suggests that instruction in job seeking could be very useful.

I remember that, when I was a budding new Ph.D., no one told me about the placement activities by which psychologists obtained jobs, such as the "hiring halls" at professional meetings. I obtained a job through one of my professors. It was an excellent position, and a very interesting one. I don't regret having taken the job, but I have sometimes wondered whether I would have taken it if I had had a broader range of choices.

BARRIERS

There are a great many occupational barriers that lie between the educational or training institutions and entry into the occupation. Examples of barriers would be various kinds of licensing requirements, often with little relevancy to job success, or union membership, especially if the union has a policy of restricting membership.

Some of these barriers may be relevant ways of assuring that only qualified people enter the occupation, and others may be highly irrelevant. For instance, City Government jobs may have the requirement that the person must have lived in the city for a given length of time. This would restrict the possibilities for employment of someone who was a resident of another place.

It seems reasonably obvious that whatever barriers exist should be identified, and the appropriate action taken to make sure that the student will not encounter a barrier in his progress through the system.

The existence of barriers also has implications for the evaluation of vocational education programs. These programs frequently are evaluated in terms of the number of students placed. If we have a very effective educational institution from the standpoint of imparting the necessary job skills, but if the student cannot get past a barrier, this is not a suitable way of evaluating the excellence of the instruction. At the

same time, it does suggest that the system needs to be looked at from the standpoint of making sure that the barrier is actually necessary, or that only those students who could get by the barrier are being guided into the appropriate educational programs.

INFORMATION FLOW

Figure 4 now completes the model by adding arrows that represent the need for information flow between the various parts. For instance, information from the various occupations is needed by the planners of educational and training programs so that the size of various programs can be adjusted to the changing demands of the world of work, and so that qualitative trends in occupations can be reflected in the educational objectives.

Information from the occupations is also needed by the guidance activities. The information needed there is clearly of a reasonably long term nature, and should include some consideration of the aptitude requirements of the occupation or its educational counterparts, early special characteristics of the occupation that would be of interest to students, and also long-range quantitative trends in the occupations.

There is also a requirement for the placement activities to obtain information concerning job vacancies and related information of a short-range nature in order to carry out the placement activities in an efficient manner.

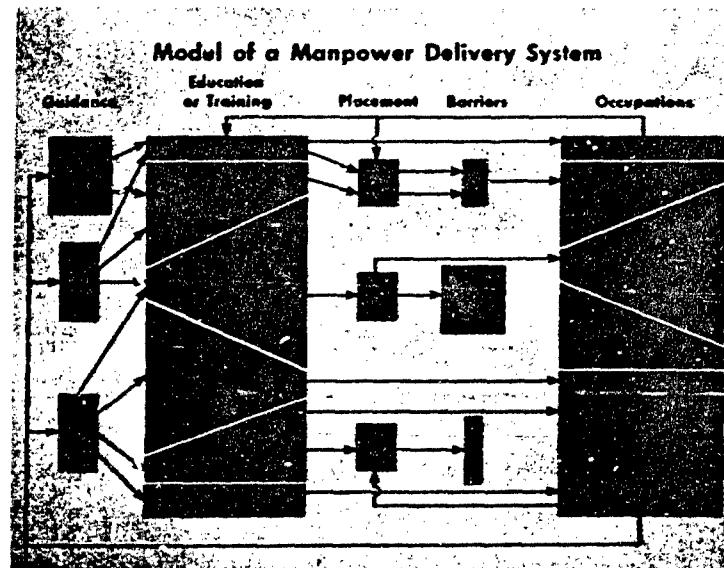


Figure 4

There clearly is a requirement for the guidance activities to provide feedback to the education and training institutions of the characteristics of prospective students.

This model has been abstract and rather generalized, but it does serve to point out to educational and training planners the principal things to consider when conducting a system analysis for vocational or professional education. Obviously, the specifics may vary from one state to another, or from one employment area to another. Nevertheless, the general points should be similar.

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13. ABSTRACT A simplified and abstract model of a manpower delivery system is presented in this paper. The relationships among the functions of occupational demands, guidance activities, placement work, occupational barriers, and interests of the job-seeker are discussed. The model points out to educational and training planners the principal aspects to consider when conducting a system analysis for vocational or professional education.		

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